PAN AMERICAN fisherman

ESTABLISHED 1947

JUNE 1955

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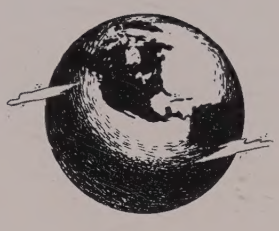

As in the Past . . . So in the Future

All Activities of the American Tunaboat Association

Are Directed to the Improvement and Prosperity

of the Tuna Industry

Wade Ambrose
President

Harold F. Cary
General Manager

AMERICAN TUNABOAT ASSOCIATION

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Catch TOTALS FOR 1954

COMMERCIAL fishermen in the United States and Alaska made total catch of about 4.7 billion ounds of fish and shellfish during 954, valued at about $345 million o the fishermen. Compared with the revious year, this was an increase f 240 million pounds (5%) in vol- me, and 5 million dollars (1%) in alue. Food-fish items showed more pectacular gains in 1954 than the pecies used for fish meals and oils, n contrast to the reverse situation in 953.

Food-fish items showing large in- reases were tuna, sardines, Maine erring, haddock, and ocean perch. The principal species taken in 1954 was the menhaden which was used almost entirely in the manufacture of fish meal and oil. The catch of these fish amounted to nearly 1.75 billion pounds or 37% of the total poundage of fish and shellfish taken in the United States and Alaska.

San Pedro Leads

San Pedro, California, led the food-fish ports in 1954 with a catch of about 381 million pounds. Gloucester, Massachusetts, was second with 232 million pounds; followed by Boston, Massachusetts, with 151 million pounds; San Diego, California, with 130 million pounds; and New Bedford, Massachusetts, with 72 million pounds.

From the standpoint of value, San Pedro led all other food-fish ports with landings worth over $37 million to the fishermen. San Diego's catch was valued at nearly $21 million while Massachusetts landings in Boston, New Bedford, and Gloucester, were worth $10.8 million, $10.3 million, and $8.3 million respectively.

The total Pacific Coast catch of salmon was about the same as the 312 million pounds taken in the previous year. However, the production of chum salmon in Alaska was the largest in many years, and there was a spectacular increase in the run of sockeye salmon in Puget Sound waters enroute to the Fraser River. The catch of these salmon was the largest since 1913. Almost no pink salmon were taken in Puget Sound during 1954 as these fish occur in abundance in these waters only in odd-numbered years. The Puget Sound catch of these fish in 1953 amounted to over 34 million pounds. Despite the large pack of canned chum salmon in Alaska and sockeye salmon in Puget Sound, the total United States pack would have been about the same as in the previous year, had there not been an increase of about 150 thousand cases of Canadian fish packed in Puget Sound.

Landings of halibut by United States and Canadian fishermen amounted to about 70 million pounds (dressed weight)—an all-time record — compared with 60 million pounds in 1953.

Although the catch of albacore off Washington and Oregon was an almost complete failure, the national catch of all tuna, which is landed chiefly in California, amounted to about 325 million pounds, compared with 305 million pounds in 1953.

Pacific sardines, which for many year yielded annual catches of more than one billion pounds, and then virtually disappeared from the waters off the Pacific Coast States, staged a comeback in 1954 with landings totaling 133 million pounds, compared with less than 10 million pounds the previous year. The catch would have been considerably larger had there been a stronger market for canned sardines.

California landings of Pacific and jack mackerel in 1954 were far below normal. The catch of Pacific mackerel amounted to 22 million pounds—14.5 million pounds more than in 1953, but far less than the record 1935 catch of 146 million pounds. The production of jack mackerel amounted to 17 million pounds—39 million less than in 1953, and only 12% as large as the record 147 million pounds taken in 1952.

Herring production in Alaska, where the catch is used for bait and manufacture into meal and oil, was about 3% above the low 1953 catch of 35 million pounds. Catches of these fish in recent years have been far below normal. During the 10 years from 1941 to 1950 the Alaskan catch of herring averaged over 130 million pounds. *

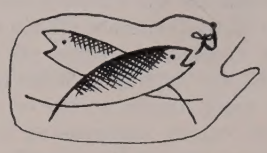
"Harbor Days" in San Diego

San Diego Harbor, one of the 10 finest natural harbors in the world, held its annual "Harbor Days" celebration May 27 through May 30. An attendance around 200,000 was estimated.

During "Harbor Days" the public was invited to explore the myriad activities of the waterfront. Open house was held by the U.S. Navy, U.S. Coast Guard, the tuna fleet, speed boat and yacht clubs and other harbor facilities. Concurrent with this a Maritime and Industrial Exposition was staged.

Added individual attractions included a "Parade of Lights." Over 100 assorted boats decorated with lights paraded across the harbor.

Speed boat races and water ski events were interspersed with Seaplane troop landings, Coast Guard air-sea rescue demonstrations and Navy underwater demolition exhibitions.



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Tuna Tariff Rates Being Tested In Court

Court action in the form of a protest directed to the Collector of Customs of the Port of New York on behalf of the Southern California tuna industry was filed in New York, May 27.

The protest charged that canned tuna is being imported into the United States at a tariff rate far below the legal duty. It calls upon the Collector of Customs to collect a tariff of 25% ad valorem on imports of tuna canned in brine as directed by the Tariff Act of 1930.

The protest declared that the Trade Agreements Act of 1934 is an unconstitutional delegation of legislative power to the President and that the Icelandic Treaty, negotiated under the Act, is null and void. This treaty established a 50% reduction on the duty on import of tuna canned in brine from that prescribed by Congress in the Tariff Act of 1930, which called for a 25% tariff.

Seeking 25% Instead of 12½% Duty

In the specific instance, filed today, protest was made against the assessment of 12½% ad valorem duty on an entry of canned tuna fish from Japan on April 5, 1955. The protest declares that an additional amount of 12½% ad valorem on this entry, in order to bring it up to the full 25%, should be collected by the Customs Office.

Accompanying the protest is a statement by Donald P. Loker, president of the California Fish Canners Association, that millions of cases of tuna packed in brine are being imported into the United States, principally from Japan, and the annual flood of this foreign tuna is increasing. Also, that imports of canned tuna into this country last year reached a million and one-half cases against a pre-war average of 337,000 cases, or an increase of almost 500%.

Loker further points out that the American tuna industry has suffered repeated setbacks during the past nine years in attempting to obtain relief from this dangerously inadequate tariff situation through action before several governmental bodies.

New York attorney John G. Lerch, who filed the protest, declared the tuna tariff action may have as far reaching effect as the Schecter "sick chicken" case before the U.S. Supreme Court which caused the demise of the NRA of depression days.

The motion is being filed by Lerch for an early hearing before the U.S. Customs Court.

California Women Carry Fight to State Capitol

Wives of fishermen from Southern California backed up the above action in two ways: 1, a busload of them went from San Pedro to Sacramento, meeting with a special committee appointed by Governor Knight on tariff relief; and 2, a number of wives demonstrated and carried placards on Long Beach docks, protesting against Japanese freighters landing with many tons of frozen fish.

PAN AMERICAN Fisherman

blished Monthly • Established 1947

KEllogg 8-5441
Orange Savings Bldg.
ORANGE, CALIFORNIA

"BUSINESS MAGAZINE OF THE WEST COAST FISHERIES"

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VOL. 9 — No. 11

JUNE

1955

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About This Issue . . .

Remember that advertising slogan, "Never under-estimate the power of a woman?" Well, women are getting into the act all around now . . . read at the bottom of page 4 about their dockside demonstrations and their march on the California State Capitol at Sacramento.

*

Both of the above were covered by state-wide newspapers, some of which carried pictures of the irate ladies. More power to the latter! Maybe they will make more impression than some of the "hearings" in Washington. After all, it is the wives and families of the fishermen that are suffering most.

*

Don Loker has taken the initiative in another effort to get action on curbing the flood of tuna imports from Japan. This time the scene is a court room in New York City . . . see "Tuna Tariff Rates Being Tested in Court" on page 4.

Sando Publications: PAN AMERICAN FISHERMAN • FRUIT & VEGETABLE REVIEW • MOTOR WEST

Pan American Fisherman is published monthly • Business and executive offices—Orange Savings Building, Orange, California, telephone KEllogg 8-5441. Postmaster: Form 3579 requested. Subscription rates in the United States and possessions, one year $3.00; two years $5.00; five years $10.00. Canada $4.00 per year; all other countries $5.00 per year. Current copies 50c each; back numbers $1.00 each when available. In case of change of address, subscribers are requested to notify both the Post Office and us, and allow one month for change to take effect. Entered as second class matter March 12, 1953, at the Post Office at Orange, California, under the Act of March 3, 1879. Printed in U.S.A.

Increased Imports from Many Countries

An increasing number of foreign countries are supplying fishery products to United States markets, according to a preliminary review of certain of principal fishery product imports made by the Fish and Wildlife Service.

Tuna, in its various forms, came from 18 different countries in 1954. In 1940, 12 countries supplied tuna to the United States. During 1954, 12 countries were shown as the source of fresh or frozen tuna, 8 countries for tuna canned in oil, and 12 countries for tuna canned in brine.

The review showed that shrimp was imported from 23 countries during 1954 compared with 10 countries supplying that product in 1940. Imports of groundfish fillets now come from 13 countries located on three continents. In 1940, such imports were supplied by two neighboring countries.

Swordfish came principally from four countries in 1954 compared with two countries in 1940. Crabmeat imports originated in six countries, about the same as in 1940.

About 38 different countries in all, contributed to the imports of these commodities during 1954. Imports of these products during 1954 totaled about 350 million pounds and had a foreign value of $87,349,000. In 1940, these same products totaled 47 million pounds at a value of $7,270,000.

Cruise Report

The "Gilbert" returned on April 20 from a 6-week fishing cruise to the Line Islands. The abundance of deep-swimming tunas was not as high as previously reported, although from one day's set of 60 baskets more than 20 tons of yellowfin were produced. Troll fish were generally abundant around the islands, the average catch being three per hour. Of the yellowfin taken, 500 were tagged and released as part of a program designed to determine the migratory habits of the yellowfin and the relationship of the surface schools of small fish to the deep-swimming adults.

The "Manning" returned on April 15 from a gear testing cruise to Line Islands. The purpose of cruise was to compare the catch efficiency of redesigned steel lo line gear with the efficiency of ton gear. The steel gear handled w and caught as many fish as the ton, and the new improvements su as a "D" ring for attaching dropp reduced the wear and tear on gear. The steel gear did not appre ably speed up the fishing, but same amount of steel gear could handled by about half the cr needed for cotton.

In the laboratory plans were co pleted for the cooperative albac survey of the north-east Pacific May and June. The cooperati agency is the California Departm of Fish and Game. POFI plans have the "Manning" and "Smit fishing from 175°W. to 139°W., a California's "Scofield" will f from the West Coast to 135°W.

Examination of plankton ha from the North Pacific suggests t the occurrence of albacore is rela to certain types of plankton anima If this relationship can be prov it could be a valuable tool in loc ing concentrations of albacore a understanding their migratory hab

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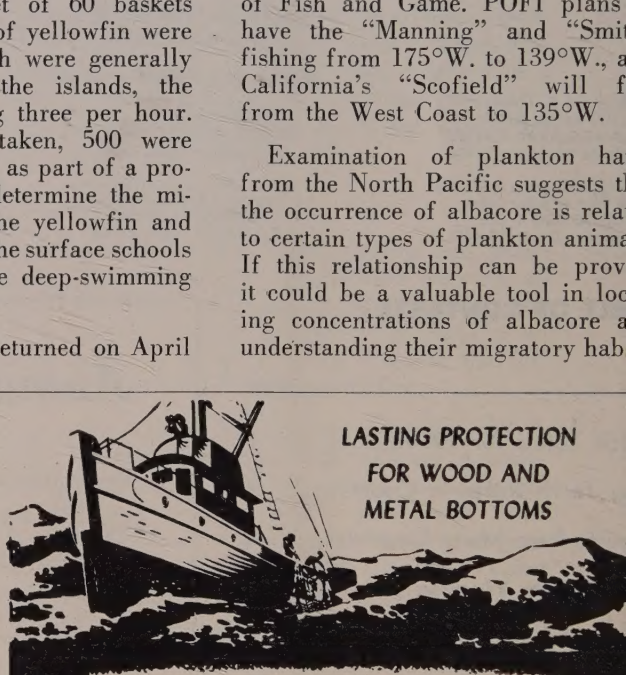

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Report from **Washington**

Gleaned from the Nation's Capital by John Harms

ADVISORY COMMITTEE.--The American Fisheries Advisory Committee has been told by Sen. Leverett Saltonstall--co-sponsor of legislation providing $3 million for development of fisheries--that the best way to insure extension of the program is to develop a sound fish promotion campaign.

The program is now winding up its first year of the three-year program. It comes up for renewal by Congress in the spring of 1957. Saltonstall indicated that Congress at that time will want to see some substantial advancement in fisheries promotion and blue-prints for further action.

So far the Interior Department, which administers the $3 million fund, has ear-marked $2.5 million of the Saltonstall-Kennedy funds in a broad program of research and marketing development.

Assistant Secretary of the Interior Orme Lewis told the first meeting of the 19-man committee that "the greatest good can be accomplished if we gather around the conference table as good partners to discuss with our operating officers--the experts of the Fish and Wildlife Service--the broad outlines of the objectives all of us want to reach."

Mr. Lewis warned, however, that the committee should steer clear of getting "entangled in detailed discussions of individual projects."

--o--

RECOMMENDATIONS.--The Fisheries Advisory Committee recommended continued emphasis on research and marketing activities, and endorsed the Interior Department's policy of contracting for as much research as possible by educational institutions and private research organizations.

It laid out 11 points the Department should consider when approving or rejecting government-sponsored promotional projects for the domestic fisheries industry. These are:

The degree of emergency or extent of distress; whether a proposal is national in scope or its degree of application to more than local areas or problems; extent of large-scale capital investment; extent of value, volume, and employment involved in a project; extent to which the fishery is affected by imports; whether results can be obtained in a reasonable length of time; relative need to fill gaps in knowledge; degree to which industry itself or States could do the work; relative need for the project and prospects for successful achievement; relation of costs to benefits, and the effect of the project among other major project categories.

The next meeting of the Committee is tentatively scheduled to be held in the Fall.

--o--

PROJECTS UNDERWAY.--Some of the major projects under the $3 million program already started include:

1. Studies to determine racial characteristics of salmon on the high seas.

2. Research on fluctuation of the California sardine.

3. Study of causes and control of toxic red tide off the Florida coast.

4. Development of voluntary Federal grades and standards for fishery products.

5. Development of chemical index and nutritive value of fish meal and development of new uses for fish oils.

6. Exploration of deep water fishing grounds in the North Atlanti

--o--

SAN DIEGO C OF C.--The U.S. Congress has been handed an intensive study of tuna "problem" conducted by the San Diego Chamber of Commerce. The study, with recommendations for solving the problem, was printed in last month's issue of this publication and placed in the Congressional Record by California Rep. Bob Wilson.

Briefly stated again here are the major suggested actions:

1. The present (Geneva tariff meetings) should not result in addi tional tuna transactions. Perhaps the free world should make some tariff concessions to Japan to strengthen her as a bulwark against internationa communism . . . but the 5-year increase in canned tuna imports of almost 700% does not indicate that present tariff rates are in fact barriers to trade.

"We cannot comprehend the proposed action of the United States government which may bind the present duty-free-rate on frozen tuna. Frozen tuna imports from Japan have increased 3500% in the last 5 years. The Government has never made it clear why this step will do anything other than place the Japanese supplier in a preferred position. The present zero duty can in no sense be termed a barrier to trade."

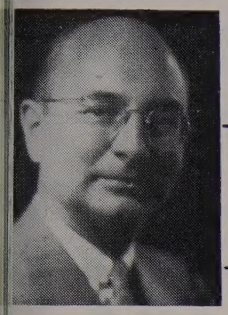
2. The San Diego C of C believes that the U.S. government should "state clearly what it intends to accomplish by concessions which, if made, will have a fatal effect on the local industry's fight to recover from past and present reverses. The Governments of the United States and Japan should discuss a businesslike settlement of the tuna problem."

3. All government officials and Congressmen should be made aware of the facts as brought out by this study, with full explanation as to why "this particular industry has been selected for possible elimination through trade agreement negotiations."

--o--

TAXES.--Don't hold your breath, but next year Uncle Sam intends to take a smaller bite out of your income.

Government budget-balancers think the U.S. will be in the "black by 1957. They base this on forecasts that 1955 will be the most pros- perous year in history for the nation as a whole . . . which will make cuts in individual and excise taxes possible in 1956. *(Continued on page*



The Publisher's Page

he Half-Way Mark in 1955.—We are at the half-way oint in the current year's operations, but this has been o half-way year. It has been a full prosperity year to late, and the last six months promise to average out just bout as good as the first six.

That's better than most of us had hoped for at the tart of 1955. Things didn't look so rosy then. Fair but othing to get excited about. Meanwhile, the internaional scene has quieted down while here in America the actories, the wholesalers and retailers, all have been etting records.

Of course there are still some trouble spots. Perhaps hey are like the fleas on a dog—they keep him interested n life. When there are no troubles in this world we'll tart looking around for a harp and some wings.

Only thing—one of the worst trouble spots in the whole American economy is the plight of the tuna boat owners and fishermen. Too much tuna is being imported from Japan—that's for sure. The U.S. tuna industry is battling for its rights, including some court actions now pending, and reasonable relief may be just around the corner.

The Good and the Bad.—Recently a leading livestock paper, the "Record Stockman" of Denver, entered its 65th year of publishing. That's longer than the 16 years of this publication, so we were interested in one of their editorials which said:

"The past 65 years have been wonderful including the good and the bad. Although we would like to have skipped over the drouths, the devastating blizzards, the economic depressions that we have told about (and suffered in our own particular business), . . . perhaps life wouldn't have been so wonderful or so interesting if the presses had turned out only the news of smooth sailing. Perhaps we need a little of the bad, a few spots of dry sledding, to keep us on our toes."

It's a sound bet that this represents the general attitude of the great industry for which the Record Stockman is a spokesman. By tradition, the livestock producers are a highly independent and self-reliant crew . . . just like fishermen, not afraid to take chances. They stand on their own feet. They take the good and the bad as it comes. They've known booms and they've known busts, and regard both as an inevitable part of their way of life. And even in grave emergencies they have refused to run to government for subsidies and other such aids.

In its editorial the Record Stockman saw great promise in the future. There's plenty of reason for that. Our population is soaring and people are eating better than ever before . . . which certainly includes tuna.

Some Things Hard to Figure.—There probably is no business in the world harder to figure than the fishing industry. To those engaged in it there must come times when they feel that following the horses would be a simpler and perhaps surer way of earning a living.

However, the love of the sea, the instinct to "take a chance" on hitting it extra good sometime, the always promised "better days ahead"—all combine to keep the fishing boats afloat and the fishermen going out to try their luck again.

The tuna industry, with its complex relationship between fishermen and boat owners and the canneries, faced many problems in the past and has always managed to come through. Today some of the problems seem tougher—partly because the industry has grown bigger, and partly because of international tensions in all countries.

No one can tell what will happen next on Japanese imports, on the extent of territorial waters, and other such subjects. But one thing is sure: the American public likes tuna and is eating more and more of it every year. So, somehow or other, the present problems will find a solution.

New Marvels.—"U.S. farming has advanced so rapidly in the last 15 or 20 years that it hardly resembles agriculture as previous generations knew it," observes an article in Life magazine. This should interest fisheries because producers of all types of food can learn from one another.

Then the article explains what caused the big change in growing crops: "During the farm depression of the '20s and the general depression of the '30s, scientists and inventors were creating marvelous new machinery, new fertilizers, new pesticides and new seeds. At the time very few farmers had the money to buy them. But when the war gave farmers an unlimited market, these aids to production were pulled down off the shelf and set to work all at once. With their help and the permission of the weather, U.S. farm output rose by a fantastic 33% . . . the capacity to produce when and if the market demands more food, has kept rising."

That same article describes what has happened on an actual farm. In 1933 the present owner and his father depended for power largely on six horses. They owned only $635 worth of crop machinery, along with some special equipment valued at $286—less than $1,000 all told. Now the owner and his son have 66 pieces of equipment, including tractors, combine, mower, sprayer, milking machinery and so on, which is valued at some $11,000.

In the same manner the cost of boats and supplies, insurance and upkeep, have sky-rocketed. No wonder the tuna fleet needs good prices for its cargo!

Speeding Along.—The world is moving fast and some of us have to step mighty lively to keep up with it. Like this:

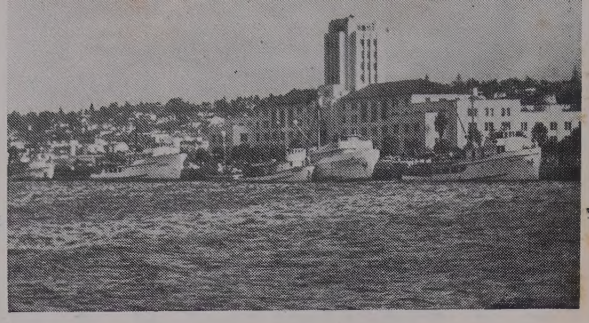
Forty miles out of Los Angeles headed for Chicago on the Super Chief, Gracie Allen let out a wail.

"Oh, George! If we only had the grand piano with us now!"

"On a trip like this why do you want the grand piano?"

"Because," explained Gracie, "that's where I left the tickets."

BRIANT SANDO



The San Diego Waterfront

By ROBERT K. LAWSON

ONLY two major events have happened here since the trap door again was released last fall, leaving the multi-million dollar Southern California tuna fishing industry hanging by its gasping throat . . . in the tightening noose of foreign tuna imports that have finally reached nearly 50% of the total American consumption.

Each event is relatively unimportant, but combined they afford partial relief to the basic local economy —the thousands thrown out of employment with the closure of the canneries and the tie-up of the tuna clippers in San Diego and San Pedro harbors.

1, Westgate California Tuna Packing Company announced resumption of operations at its plant here after a closure of some three months, putting back to work about 600 persons; and 2, the Van Camp Sea Food Company plant opened with what was described as a skeleton crew (and likely to remain thus indefinitely) with about 200 employees back on the payroll.

Along with the opening of the latter's plant came an announcement from this firm describing their operations abroad. In January, 1954, the Van Camp Sea Food Company, Inc., Terminal Island, California, entered into a lease with the United States Department of the Interior to utilize an abandoned tuna cannery in Pago Pago, American Samoa.

The Department of the Interior, responsible for the government of American Samoa, foresaw the possibility of providing employment for Samoan and mainland Americans through development of the Southwestern Pacific tuna fishery. Several hundred Samoans have since been employed, giving substantial support to the economy of the small island.

In the 16 months of operation, the California firm has processed at Pago Pago an amount of tuna equivalent to approximately 1% of its total mainland production during the same period.

Last year, Van Camp, in cooperation with Pacific Oceanic Fisheries Institute, supported a long-line fishing experiment with two Southern California fishing vessels, the Alirita and the North American, in the Southwestern Pacific area near Christmas Island. The operation was moderately successful and it is hoped other California vessels of suitable design will follow and deliver their catches to Pago Pago.

The plant at Pago Pago, originally constructed in 1948, is currently in the process of being modernized to conform to present day processing methods and, at the same time, the capacity of 20 tons per day is being increased to handle approximately 30 tons per day. This will accommodate peak fish deliveries.

Fish for the plant have been supplied to date by Japanese fishing vessels which have operated in these waters for 20 years or more. These boats in the near future will have the services of a Japanese freezership, the Saipan Maru, to supply them with ice, fuel, and stores. In addition, the freezership will provide an outlet and storage for fish such as swordfish, shark, and shark-bitten tuna which are unacceptable to the cannery, but have a market value in Japan.

Various articles in this magazine during past months were reflected in the recent hearings in Washing on the extension of the Recipro Trade Agreements Act, and its eff upon the importation of foreign tu One article by this writer in anot publication was made a part of Congressional Record, pointing the drastic economic effects of f eign operations on both the local a national economy of the Uni States.

This economy is affected basica in innumerable ways. For examp only two new tuna clippers h been constructed in West Coast sh yards in several years. The effect this situation is more than local its import. It widely affects the s to the industry of thousands of la and small products manufactured over the country, thus depriving U citizens of employment, both loca and nationally.

Several ship chandlery suppli have been forced into bankrup and others are expected to foll suit. The full impact of this con tion so far has been felt for the m part locally—where the tie-up 50 to 75 tuna clippers, for peri of 60-90-100 days, has resulted drastic financial pressures.

Closures of the local tuna cann plants not only has deprived ma people of employment, but also ot hundreds of fishermen are forced seek employment elsewhere wh their vessels are tied to the doc waiting to unload their catches forced to remain in the harbor cause of the insecure status of industry.

Last month the San Diego Cha ber of Commerce recognized the c ical situation, and appointed an vestigating committee to make a st of the industry, particularly w regard to high tuna imports. T results were published in the M

sue of this magazine. Their findgs coincided with the proposals stered within the industry in apeals to the State Department for e last several years.

Late last month (May) another mmittee was formed to appeal to vernment heads on a State level to ek relief. The members of this mmittee were: Anibal Freitas, Capin of the tuna clipper Sun Traver; Walter A. Turner, accountant r 12 tuna clipper accounts; Joseph . Rogers, managing owner of the na clipper Aggressor, and captain f the tuna clipper Valiant; David . Carsten, managing partner of the ipyard Harbor Boat & Yacht Comany; Clarke D. Williams, sales anager of the San Diego Marine ardware; and Frank Correia, manging owner of the tuna clipper Merhaid, and captain of the tuna clipper Mauritania.

It is significant that none of these ersons are paid lobbyists or paid ressure groups. All acted with sinere effort at their own expense to rotect the money they have invested n the tuna fishing industry. Later nother group was formed comprised f the wives of members of the ndustry.

They were Mesdames Frances Zeuff, Betty Gonsolves, Mary Barrett, Roberta Crowley, Mary Bebelo, Mary Correia, Yvonne Silva, Louise Virssimo, Patricia Somers, Algerina Maughan, Nila Collini, Virginia Hollard, Bernardine Halbert, Filomena Fair, Mary Rogers, and Vera Ronaini.

Both groups, on different dates, met with Governor Knight and Lieutenant Governor Powers, to present their problems. Each received a hearty reception and the promise of full cooperation. Governor Knight said it is a "very grave problem." Lt. Governor Powers was quoted as saying that "if the beef industry was operated on the same basis as the tuna industry, it would be out of business immediately."

The American tuna clipper fleet has shrunk from a peak of 210 vessels, in 1951, to a low of 168 vessels, in 1954. Meanwhile Japanese imports of tuna to this country have continued to soar from a point where the American industry held 91% of the American market to a point where they now hold about 50%.

Fishermen were concerned last year when imports hit a new high of 82,500,000 pounds. Now 1955 is setting a new record—imports totalled 38,000,000 pounds in the first four months; later figures are not yet available. Presently 70 tuna clippers are tied up in port with fish aboard waiting to unload, while imports are taking precedence.

According to Harold Cary, general manager of the American Tunaboat Association, representing nearly all of the tuna clippers fishing the high seas from San Diego, the tariff-free frozen tuna from Japan has cost the San Diego fleet five million dollars so far this year.

Cary told the Commissioners the fishermen have to wait an average of 6 days to unload their vessels after arriving in port. One competent tuna clipper owner estimated the cost of laying up his clipper could run as high as $500 per day in port. Couple with this the fact that more than 1,000 cannery workers and fishermen are out of work today in San Diego, and you get some idea of the economic impact of tuna imports.

All the industry asks is that a fair quota on imports be established to limit Japanese imports to this country to 20 or 30% of the American market, or 25 to 30% of the frozen tuna landed in this country. The latter would be preferable, because frozen tuna imports from other sources are rapidly gaining headway. *

American Fisheries ADVISORY COMMITTEE Holds Meeting

Broad policy recommendations adopted by the American Fisheries Advisory Committee at its first session on April 28 and 29 have been submitted to the Fish and Wildlife Service.

The Committee recommended continuance of the program launched last year by FWS after the 83rd Congress passed the Saltonstall-Kennedy Act to promote increased production and marketing of domestic fishery products.

Continued emphasis on research and marketing activities in the Service program was urged. The Department's policy of contracting for as much research as possible by educational institutions and private research organizations was indorsed by the Committee.

The Committee after reviewing applications for allocations of Saltonstall-Kennedy funds in the current fiscal year and in the fiscal year beginning July 1, advised against committing substantial amounts for major construction projects.

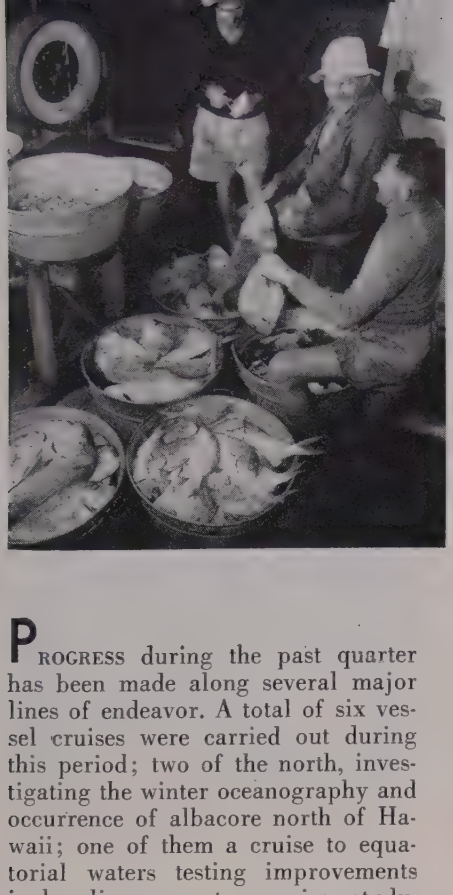
Assistant Secretary of the Interior Orme Lewis presided over the initial Advisory Committee session which was attended by 16 of the 19 members. He outlined the program of research and marketing development already underway.

"It is my belief," Assistant Secretary Lewis said, "that the greatest good can be accomplished if we gather around the conference table as good partners to discuss with our operating officers—the experts of the Fish and Wildlife Service—the broad outlines of the objectives all of us want to reach. We shall expect you to speak your minds freely."

Senator Saltonstall of Massachusetts, co-author of the Act, urged the Committee to recommend a policy which will see the United States fishing industry go forward well prepared to meet competition from any source.

The following members of the Committee from the West Coast were in attendance: Lawrence Calvert, Seattle, Washington, Mark L. Edmunds, Garibaldi, Oregon, Donald P. Loker, Terminal Island, California, J. W. Mendenhall, Ketchikan, Alaska.

Two Western members, Thomas F. Sandoz, Astoria, Oregon, and A. H. Mendonca, San Francisco, California, were unable to attend. The next meeting of the Committee is tentatively scheduled for the early fall.



Pacific Oceanic Fisheries Institute

QUARTERLY REPORT
January 1-March 31, 1955

PROGRESS during the past quarter has been made along several major lines of endeavor. A total of six vessel cruises were carried out during this period; two of the north, investigating the winter oceanography and occurrence of albacore north of Hawaii; one of them a cruise to equatorial waters testing improvements in longline gear; two cruises studying certain phases of the Hawaiian skipjack problem; and the other a study of the distribution of yellowfin stocks in the vicinity of Line Islands.

Our staff, in cooperation with coastal research agencies, completed plans for two major oceanographic cruises this coming summer and fall. The first, called "Norpac," involves Scripps Institution of Oceanography, California Fish and Game, South Pacific Fishery Investigations, University of Washington Oceanography Department, Pacific Oceanographic Group of Canada, and informally Japanese oceanographic agencies. The plan calls for cruises across the North Pacific from the shores of Japan to the Pacific coast of North America. It will be the largest joint oceanographic endeavor of its kind ever attempted and should provide data of great value in understanding the North Pacific current systems.

The second joint cruise is called "Eastropic" and will provide information on the region between the central equatorial Pacific and Central America. Starting in September and finishing in December, our portion of the cruise will emphasize the relationship of the northern edge of the countercurrent to the productivity of these waters; the continuous form from west to east of the countercurrent; the vertical and horizontal distribution of plankton in the eastern equatorial Pacific; the contribution of the Peru Current to the equatorial enrichment; and other such problems.

Oceanography

Processing and analyzing the data from the oceanographic cruises to the North Pacific has continued. The hydrographic data, the salinity titrations, the temperature corrections and calculations of thermometric depths are in progress.

There are some interesting oceanographic features in the area north of Hawaii. There is a zone of sub-tropical convergence between the westerly flowing North Equatorial Current and the easterly moving North Pacific Current. This convergence zone, characterized by sinking of warm, more saline surface waters, is 2 to 3 degrees of latitude in width; the zone moves south near the Hawaiian Islands in the winter (26° N.) and shifts to the north (29°-30° N.) in the summer.

Our data shows another transition zone between the North Pacific Current and the Aleutian Current, both of which are easterly flowing. The waters of the Aleutian Current are relatively cold and less saline. As in the case of the convergence near the Hawaiian Islands, this transition zone shifts with the seasons, located near to 34°N. in the winter and 45°N. in the summer.

Our biological sampling has demonstrated an increase in standing crop of fish and other marine animals immediately to the north of the convergence zone between the North Equatorial Current and the North Pacific Current. This evidence of increased biological activity continues across the North Pacific Current and into the transition zone between the North Pacific Current and the Aleutian Current. During each cruise to date, the albacore have been caught in or near to the northern transiti zone.

We are now preparing an analy of all seven cruises, with particu emphasis on the interrelationsh between the fluctuations in the tra wind system—the driving force the zonal, equatorial circulation and the observed fluctuations in su factors as current speed, intensity upwelling, etc.

Some current features are expla able on the basis of the barrier i posed by the Hawaiian Islands cha Although there is some flow throu the channels, the middle group islands (Oahu-Maui) act as a so barrier, so the circulation to the ea or windward, is split by the barri with the major part of the fl deflected to the right or in a nor erly direction. The relationship this current picture and the distril tion of skipjack schools is now bei studied. There is indication that resulting eddies formed in the lee the islands by this system affect distribution of skipjack with conc trations of schools on the edges the divergent eddies.

Productivity Studies

Although the abundance of z plankton peaks at the Equator, v umes to the north average grea than to the south. This unsymme cal distribution results from the pr alence of southeast trades. The creased abundance along the nor ern boundry of the countercurre particularly evident in the east Pacific, may be related to the con nation of shallow thermocline a strong east to northeast winds wh results in enrichment of the surf waters from wind induced tur lence.

As determined from longline fi ing, the greatest concentration of y lowfin occurs in the convergent z

ust to the north of the area of greatst zooplankton abundance. Along ie Equator there is a gradient of ncreasing zooplankton abundance om 180° to 140°W. longtiude which correlated with average wind velocy and inversely with thermocline epth, and is closely paralleled by gradient of increasing yellowfin atch. Highest zooplankton concenrations occurred in the quarter July-ugust-September, which was also ie period of highest yellowfin catch, nd lowest in the period January-ebruary-March.

una Distribution Studies

In conjunction with our albacore rogram in the north Pacific, study f the plankton revealed two interesting discoveries: (1) land influnce as reflected in the occurrence f larvae and crab zoea is quite extensive, and may indicate the extent nd direction of current drift from sland groups and other land masses; (2) a marked coincidence has been oted in the occurrence of albacore nd certain species of copepods, particularly a cold water form. Although his phase of our plankton program s just getting underway, it shows romise of some very helpful information.

It may be possible to relate the variations in abundance of equatorial yellowfin to changes in the ocean environment which in turn can be ascribed to changes in the wind structure. Along each longitude the catch rate is very closely linked to the water temperature. Relatively cold water is associated with poor fishing and warm water with good fishing. Presumably the cold water is newly upwelled and has not yet developed significant quantities of tuna forage. The warmer water is mature insofar as tuna are concerned, presumably containing adequate supplies of food.

It also appears that variation in catch from east to west can be reconciled with these same concepts. Generally, the water to the east (120°-130°W.) is very cold and we experience poor fishing. In mid-longitudes (150°-155°) the waters vary from moderately warm to cold and fishing varies accordingly. In the far west (170°-180°W.) the water is usually very warm and has presumably reached a senescent stage, for fishing is only moderately successful as would be expected.

Age and Growth

In the Hawaiian fishery there exists a size difference between the sexes of yellowfin, the males attaining greater size than the females. The sex ratio is about 60% males to 40% females, and this ratio remains fairly constant throughout the year.

The smaller fishes (110-120 lbs.) enter early in the season in June and July, with the larger fishes (180-220 lbs.) coming later in August and September. There does seem to be a slackening of the growth rate in the latter half of each year which may be the result of the migration into and out of the fishery.

The equatorial yellowfin show about the same size characteristics as the Hawaiian specimens, namely sexual differences, changes within the year, and between years. No predominant year classes are traceable from year to year. This indicates a migration to and from the mid-depths, and probably out of the region as well.

Examination of size frequency distribution from the western equatorial Pacific, central equatorial Pacific, and Hawaiian Islands indicates that when modes do occur they are all in similar positions, so the growth rates are believed to be similar in these areas. Because certain size modes are consistently missing from central and western equatorial samples, a relationship between the stocks of the two areas is believed to exist.

(Continued on page 20)

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EBB 'n FLOW

Albert M. Day Retires

Albert M. Day, Assistant to the Director of the Fish and Wildlife Service, will retire on June 30 after 36 years of Federal service.

Mr. Day, who was Director of the Service from 1946 to 1953, is joining the Arctic Institute of North America where he will direct a fact-finding study of migratory waterfowl.

Mission Bay Park Celebration

Mission Bay Park in San Diego, apparently destined to be the world's greatest aquatic playland, will stage a Channel Reopening Celebration July 24.

The day-long festivities, to be joined in by state and county officials, marks the reopening of the bay's ocean channel, closed three years ago.

Embracing 31 miles of beach, yachting and boating facilities, motel and trailer park accommodations and a golf course, Mission Bay Park is a $20,000,000 project.

All aquatic sports—sailing, speed boating, water skiing, swimming, skin diving and synchronized events—will be represented.

San Diego's Yellowtail Derby

The $25,000 San Diego Yellowtail Derby, now in its ninth year, has lured sportsmen from every state of the union.

An expected 100,000 are expected to vie for an amazing list of prizes including new automobiles, refrigerators, deep freezes, tackle and fishing equipment before the closing date in late September.

Charter boats run twice daily to the yellowtail's favorite hideouts off the Coronado Islands or Point Loma. Tackle and bait is furnished the angler, all at costs ranging from $4.50 to Point Loma (7 hours) to $8.75 for the Coronado trip (12 hours). Escorted ladies ride for 75c on all Friday afternoon trips.

Anti-Rust Paint

A new black anti-rust paint that is said to afford low cost protection of exterior metal work is known as CI-88. It incorporates a bituminous base with a special paint vehicle to produce a heavily bodied coating which can be applied on outside metal after a minimum of surface preparation. Can be applied by brush, spray or dip. For additional information, write to Chem Industrial Co., 3784 idge Rd., Brooklyn 9, Ohio.

Automatic Direction Finders

Nation-wide distribution of Lear Automatic Direction Finders is being accelerated by the appointment of additional dealers, according to George Otis, Vice President of Lear, Inc., Santa Monica, California. He also states that the equipment is being offered by a number of stock boat builders. Newly appointed West Coast dealers include:

Electronic Navigation Equipment Co., Point Loma Station, San Diego, Calif.; Ets-Hokin & Galvan, 218 N. Avalon Blvd., Wilmington, Calif.; Sounder Sales & Service, 713 East Hastings St., Vancouver, B. C. Canada.

Numerous installations of this new, high-precision navigation aid are being made on fishing boats and coastwise vessels. The Lear unit is said to be the first fully automatic direction finding device developed for marine service, and incorporates a radio receiver that covers the marine beacon, broadcast and communication bands. Bearings of the transmitting stations in relation to the ship are visually shown on a compass-type indicator that permits immediate plotting on the chart.

Enterprise Ad Man

Michael E. Conway has been appointed advertising manager of Enterprise Engine & Machinery Co., subsidiary of General Metals Corporation, San Francisco.

Prior to joining Enterprise, Mr. Conway had been advertising manager of Pacific Car, Seattle. He is a graduate of the University of Wisconsin, and while in Seattle served as President of that Chapter of the National Industrial Advertisers Association.

Boat Cleaner

Recent work done by the familiar Magnus Cleaner No. 55 in the cleaning of fishing boats points the way to material savings in this kind of operation.

Made by the Magnus Chemical Company of Garwood, N. J., this cleaner is recommended for safe, fast cleaning of painted surfaces, along with a deodorizing and disinfecting action obtained when it is used.

In the case of the fishing boats the craft are first flushed off with a water hose and then a dilute solution of the cleaner is applied with a brush or mop. Little brushing effort is required to remove all residual dirt, oil and stains. It also has a definite disinfecting action and leaves the areas cleaned with a fresh, clean odor. Even the persistent odor of fish is effectively removed.

New President of N.F.I.

Francis W. Taylor, Warren Fish Company, Pensacola, Florida, was named President of the National Fisheries Institute at its tenth annual convention in New Orleans, La.

Jack Meletio, Meletio Sea Food Company, St. Louis, Missouri, was elected Secretary; and Lloyd Turnacliff, Meredith Fish Company, Sacramento, California, was chosen Treasurer. All elections were unanimous.

E. M. Concannon, the retiring President, became Chairman of the Board of Directors. During the convention, each region held a caucus of its members and elected a Vice-President; elected from the West Coast were Albert D. Levy, Washington Fish & Oyster Co., San Francisco, Calif. (Region 4) and W. B. Hall, Booth Fisheries Corp., Seattle, Wash. (Region 5).

TIDES OF THE INDUSTRY

alue of "Wonder Fish"

A new survey of the culture of ilapia, especially *Tilapia mossamica* which has been introduced in 3 countries outside its native Africa, as been made by Pierre Chimits of ıe Ministry of Agriculture, Paris, ı the current issue of the "FAO isheries Bulletin." It brings out ıany of the points, both good and ad, in the culture of the so-called wonder fish."

Referring to the popularity of Tilpia since World War II, Mr. Chimits rites: ". . . it has made prodigious rogress in fish culture in warm aters and there are great expectaons for it as a new source of proin food. This phenomenal appearnce derives partly from the fact that ll the *Tilapia mossambica* distribted in open and closed waters of ndonesia, America and Asia come rom five specimens found by chance t the end of 1939 at Pagungan near Kedri in East Java. It is certainly the est example of intentional distribuion by man of a species which is at once wild and domestic . . ."

But, despite phenomenal progress, this should not be regarded as a "miraculous fish whose introduction everywhere could only be beneficial and represent the last word in fish culture."

There are, in fact, upwards of 100 species of Tilapia, all of them natives of Africa, and FAO fish culture experts, who have done much to develop the culture of *Tilapia mossambica* in the inland fisheries of under-developed countries, are now experimenting with and accumulating knowledge about the other species.

Sales Increase Reported

Universal Motor Company, Oshkosh, Wisconsin, manufacturers of 100% Marine engines and lighting plants reports a continued sales increase for each month of 1955. Shipments in April 1955 were 40.1% ahead of April 1954 and represented the best volume month since June 1943 or the best in 12 years.

Proposed Organization for Trade Cooperation

An Agreement on an Organization for Trade Cooperation (OTC) to administer the General Agreement on Tariffs and Trade (GATT) was negotiated during the Ninth Session of the contracting parties to the General Agreement which convened at Geneva, Switzerland. The question of U.S. participation is now before the Congress. The President has recommended to the Congress that it approve U.S. participation in the Organization.

This Agreement will enter into force when accepted by governments accounting for 85% of the foreign trade conducted by the contracting parties to GATT. Under this arrangement the Organization Agreement cannot enter into force without acceptance of it by the United States, since the latter accounts for over 20% of the total foreign trade of the countries that participate in GATT.

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Pacific Telephone

FAO YEARBOOK of Fishery Statistics

WORLDWIDE FACTS, FIGURES AND TREND

An event of importance to those engaged in the world's fishery industries, is the publication of the "FAO Yearbook of Fishery Statistics" by the Food and Agriculture Organization of the United Nations, Rome, Italy. For here, compressed in 250 pages and 69 tables, is a mass of statistical information gathered from more than 160 different countries, providing a comprehensive picture of world fisheries and making global and regional analyses possible.

The Yearbook was first published in 1947 by the Fisheries Division, FAO, and has since then been gradually expanded in size and scope until this year it is, for the first time, published in two parts. Part I, dealing with Production, has now appeared; Part II, which will deal with Trade, imports and exports, will be published later in the year. Although both parts are complementary, they are also complete in themselves. Both are being bound in stiff board and are being published at $3 each.

Part I which is reviewed here is divided into four sections: catch and landings, utilization, fishing craft, and historical summaries. Catch and landings are dealt with in tables which not only give the estimated total world catch of fish, crustaceans, mollusks, etc., but analyze the catch by groups of species, fishing areas, continents, regions and countries. There are also six tables in which the catch for each continent is given in terms of national currencies and U.S. dollars.

The section dealing with utilization of the catch consists of a summary table, six tables for the continents, detailing the disposition of the catch by groups of species and countries, and 22 commodity tables giving data on quantities of fresh, frozen, dried, salted, smoked and canned fish, fish oils, meals, etc., produced.

The fishing craft section lists the craft by characteristic categories. This provides a rich source of factual information but, because of the wide range of differences on the part of various countries in selecting and categorizing craft, the tables have but little comparative value.

The historical summaries provide a new section which gives a fairly comprehensive view of fish landings throughout the world during the past 44 years (1910-53). The data are arranged in six tables, one for each continent and two for the whale catch.

World Fish Catch Bigger

The Yearbook is a mine of information in which it is interesting to note, for example, that the total world catch of all species of fish, crustaceans, mollusks, etc., has long since recovered from the effects of World War II; and at the estimated figure of 27,000,000 metric tons for 1953, is now about one-fifth greater than it was in 1938.

Reference at this point to the historical summaries will provide a picture of the nature and extent of the growth of fish production. It is estimated that African countries produced about 470,000 metric tons of fish before World War II, but by 1953 that production had reached a estimated 1,540,000 metric tons, a increase of more than 220%.

North American fish productio was about 3,150,000 metric tons 1938; by 1953 it had increased about 3,450,000 tons or nearly 10% But perhaps the most impressive i crease of all is that made by Eur pean fishermen who, it is estimate caught about 5,470,000 metric to before World War II and now catc about 7,160,000 tons (1953 est mated catch). European fisherme are, therefore, landing almost 2,000 000 metric tons more fish today tha in 1938, a huge increase in weigh

At the same time, on the oth side of the world, Australia and Ne Zealand have also stepped up fis production, from about 70,000 me ric tons in 1938 to about 100,00 tons in 1953.

The fish catches in the countri of Southeast and East Africa are special significance, as fish may pr vide a rich source of animal prote which is urgently needed in the di of masses of the people in unde developed countries. Indeed, muc of the work of Fisheries Divisio FAO, is devoted to programs f developing the fisheries of such cou tries.

Japan is one of the world's gre fishing countries and statistics in t Yearbook show that the Japane have not only recovered from t serious loss of productions sustain between 1944 and 1949 but are no catching more fish than ever befor 4,577,000 metric tons in 1953 co pared with 3,562,000 metric tons

938. This puts them in the No. 1 ot; U.S. is second in landings with ,385,200 metric tons in 1953.

lore Herrings, Sardines, Anchovies

While there have been in recent ears big developments in fishing for iiscellaneous marine teleosteans, of- n in new fishing grounds, it is nteresting to note that the humble erring still forms, together with the ardine and anchovy, the largest sin- le catch, an estimated 6,500,000 netric tons of the total 27,000,000 ons. But not only is this the biggest ingle catch, it is also bigger than he comparable catch before World War II. This fact is illustrated in the Yearbook in tables which detail the 938 catch of a group of selected ountries. The catch was about ,260,000 metric tons in 1938 com- pared with 5,260,000 tons in 1953, n increase of upwards of nearly one quarter.

This is, of course, in line with the general world trend which has led to an overall increase of about 21% in fish production since 1938. Tables in the Yearbook, referring to selected countries responsible for about two-thirds of the world total of 27,000,000 metric tons, show that the chief gains have been registered in the following species:

Flounders, halibuts, soles, etc., now yield about 470,000 metric tons a year, an increase of about 60% over the pre-war catch; tunas, bonitos, mackerels, etc., are now being caught at the rate of 1,150,000 metric tons a year, an increase of about 90% over the pre-war catch; miscellaneous marine teleosteans are being landed at a rate of about 3,000,000 metric tons a year, which represents the substantial increase of 130% over the 1938 catch. The increase in the catch of mollusks is even greater, 160%, landing now being about 1,700,000 metric tons a year.

The only group showing a smaller yield than in the years before World War II is that composed of salmon, trout, smelts, etc. For this group the catch is now only about 50% of the 1938 figure. Conservation policies which have been put into effect in the Pacific Northwest are now bearing gratifying results and similar measures which are being used to protect, control and develop the Atlantic salmon fisheries should go far towards re-establishing the flourishing industry they once supported.

Norwegians World's Leading Whalers

There is no news in the fact that the Norwegians catch more whales than anyone else but it is interesting to note in the Yearbook how really dominant the Norwegian position is in this industry. For example, in the 1952-53 season the total world catch of whales was estimated at 43,439 and for this number the Norwegians caught no less than 11,620—more than 25%. When complete figures are published for the 1953-54 season the Norwegian share may be even greater as they caught 14,905 whales, which represents more than a quarter of the peak season of 1950-51 when the total world catch amounted to 55,795.

The British came second in whale catching, but a long way behind the Norwegians. For instance, compared with the 11,620 whales caught by the Norwegians in the 1952-53 season, the British caught only 6,964, and during the 1953-54 season the two figures were 14,905 and 7,620.

Between them, the Norwegians and the British account for nearly half the total catch, although this proportion is likely to grow less as other countries are taking a more active part in whaling. Peak year for the U.S. was 3,689 whales in the 1936-37 season. This has now dwindled to practically nothing.

The Japanese have made a significant return to whaling and are now in third place. Before World War II they caught more than 7,000 whales a year; after the war and up to 1948 they caught less than 3,000; but last season they caught over 6,000. On the other hand, the Germans, who also caught more than 5,000 whales before 1939, have not yet re-entered the whaling industry.

More Fish Used for Reduction

The significant increase in processing fish and fish offal to produce fish meal and other products, which has been a noticeable feature in recent years, is reflected in the section of the Yearbook dealing with utilization of the catch. It reveals many interesting differences in the disposition of catches in various parts of the world.

Of the total world catch of approximately 27,000,000 metric tons, the Yearbook shows that 11,000,000 or two-fifths are put on the fresh fish market, 7,000,000 metric tons or one quarter are cured, and 4,000,000 tons or nearly one-fifth are used for reduction purposes. But figures in tables given for selected countries show some rather startling differences in these proportions. For example, in Africa only one-tenth of the catch is sold on the fresh fish market, one-fifth being canned, and no less than three-fifths being used for reduction purposes.

On the other hand, North America provides an example of fairly even disposal of the catch; one quarter is put on the fresh fish market, one quarter is used for reduction, one-fifth is canned, nearly one-fifth is frozen, one-tenth is cured, and 2% is used for other purposes. In Europe the pattern is again different: two-fifths put on the fresh fish market, one quarter is cured and one quarter is used for reduction.

In Denmark and Norway the story is very different. Denmark landed 342,000 metric tons in 1953 and used 125,200 of them for reduction purposes, putting only 119,500 metric tons on the fresh fish market. Norway with a catch of 1,505,500 metric tons put 778,500 metric tons into reduction plants in 1953—more than half the total catch. Of the rest, 443,600 metric tons were cured and only 156,700 metric tons were sold in the fresh fish market.

These are only a few facts and figures taken at random from the "FAO Yearbook of Fishery Statistics" but they indicate the complete nature and scope of the work. Copies of the Yearbook (Part I) can be obtained direct from FAO, Rome, Italy, for $3 a copy, post paid. Part II, which will be published at the same price, will be available later in the year. *

Healthy Advances In

Canned Fishery Products

CANNED fishery products and by-products registered healthy advances in both volume and value in 1954, according to an annual summary report released by the Fish and Wildlife Service.

The 1954 pack of canned fishery products, processed in 400 plants in 25 States and in Alaska, American Samoa, Hawaii, and Puerto Rico, amounted to 867,986,000 pounds and was valued at $331,027,000 to the packers. This is an increase of 10% in volume and 8% in value compared with the previous year.

Fishery byproducts in 1954 were valued at $81,571,000, a gain of 10% over 1953.

The 1954 gain in production in canned items can be attributed to increased packs of tuna, Maine and Pacific sardines, salmon, and the fish packed for pet food.

The pack of tuna and tunalike fishes exceeded that of any other item in both volume and value, and amounted to 10,889,000 standard cases (214,454,000 pounds), valued at $142,149,000. Compared with 1953, this was an increase of 1,309,000 standard cases in volume, and $15,891,000 in value. The tuna pack was worth 54% more than that of salmon which ranked second in value. Tuna was packed in seven States, Hawaii, Puerto Rico, and, for the first year, in American Samoa.

The pack of canned salmon in 1954 amounted to 4,163,000 standard cases (199,831,000 pounds), valued at $92,281,000 to the canners —an increase of 6% in volume and 11% in value compared with 1953. The largest pack of sockeye salmon in the Puget Sound area since 1913, and an unusually large pack of chum salmon in southeastern Alaska were responsible for the gain.

Pacific sardines returned to southern California waters in 1954 after an almost complete absence during 1952 and 1953. The catch of 133 million pounds was used to produce a pack of 1,333,000 standard cases (59,969,000 pounds), compared with less than 64,000 cases in 1953. Had there been a market for additional supplies of canned sardines, it is estimated that the pack could have been doubled.

The pack of Maine sardines amounted to 2,935,000 standard cases (59,579,000 pounds), valued at $18,153,000 to the packers. Compared with the previous year, this represented an increase of 5% in volume and 7% in value.

In the byproducts field, a new record was attained through the production of 256,915 tons of fish meal, worth $32,748,000. This was nearly 18,000 tons more than in 1953 and 13,000 tons above the previous 1936 record production.

The production of marine animal oils in the United States and Alaska during 1954 amounted to 22,144,000 gallons, valued at $13,136,000 to the producers. This was an increase of 9% in volume compared with 1953, but was only 55% of the record 1936 production when 39,902,000 gallons of oils were produced.

Other important byproducts produced during the year were marine pearl-shell, oyster-shell, and freshwater products valued at $15,843,000. Byproducts were manufactured in 227 plants in 25 States, Alaska, American Samoa, and Puerto Rico in 1954. *

Australian Tail Exports

In a period of seven years, Australian exports of frozen rock lobster tails to the United States have grown to almost four million pounds. Exports of crayfish (rock lobster) earned $3.2 millions for Australia in 1952-53. This compares with $2.6 millions in 1951-52—an increase of 23% and more than triple the $1 million in 1948-49.

Of the total four-million-pound pack of frozen tails exported by Australia in 1952-53, 97% was taken by the United States.

Australian rock lobsters are caught by fishermen who operate either independently or as members of a cooperative. In only a few cases do the processors have interests in vessels.

The rock lobsters are caught in large "pots" or traps made of cane, wire, or wood. Each trap is capabl of holding upwards of 40 fish. Afte they are removed from the traps th lobsters are kept alive until they ar processed. Processing consists o drowning the rock lobsters in fres water, removing the heads and ver tral tubes, and washing the tails in solution to remove bacteria. The tail are then wrapped in cellophane cased in wooden boxes, usually 2 pounds to the case, and placed int the freezers.

Stringent regulations have been se up for the rock lobster tail industr by the Australian government. In spection is rigid, and as a result th Australian pack has gained an excel lent reputation in the American mar ket.

U. S. TUNA CATCH CAN BE INCREASED

The United States catch of tun could be greatly increased by adop tion of methods for taking subsu face stocks not now exploited and b fishing new areas in the mid-Pacifi the Fish and Wildlife Service report as the result of a comprehensiv study.

The tuna fleet consists of craft o which little improvement can b made to increase the present effic ency of production. Unless some re olutionary means of catching tuna developed to a practical stage, ther appears to be little chance of cu tailing production costs through in creased effectiveness per-unit-of-cre effort.

An important aspect of the tun fishery is live bait, since 70% of th total catch of tuna by United Stat vessels is made with it. Between 8 and 90% of the bait supply is foun in foreign countries. Development a suitable synthetic bait or substitu source of natural bait would benef the tuna industry. Researchers a working on this.

At least 50% of the weight of th whole tuna, as landed, is not canne The so-called "waste" materials used to produce liver oils, solubl liquid fertilizer, oil, and meal.

The two leading canned fish pro ucts for human consumption, tu and salmon, show divergent consum tion trends—the demand for tuna increasing while that for salmon h declined.

Pack of Tuna and Tunalike Fishes, 1954

Species	California		Washington, Oregon and Hawaii		Atlantic Coast Puerto Rico, and American Samoa		Total	
Tuna:	Cases	Value	Cases	Value	Cases	Value	Cases	Value
Albacore:								
Solid pack	1,034,645	$16,121,919	370,948	$6,150,800	16,676	$208,426	1,422,269	$22,481,145
Chunks	368,800	5,267,485	51,138	670,969	5,888	79,904	425,826	6,018,358
Flakes and grated	323,203	2,933,468	122,322	1,067,615	2,069	16,165	447,594	4,017,248
Total	1,726,648	24,322,872	544,408	7,889,384	24,633	304,495	2,295,689	32,516,751
Yellowfin:[1]								
Solid pack	1,010,751	14,852,344	45,613	655,629	32,223	426,030	1,089,587	15,934,003
Chunks	1,815,631	24,371,028	181,864	2,148,239	34,175	397,031	2,031,670	26,916,298
Flakes and grated	610,161	5,538,130	20,505	154,905	55,885	518,396	686,551	6,211,431
Total	3,436,543	44,761,502	247,982	2,958,773	123,283	1,341,457	3,807,808	49,061,732
Bluefin:								
Solid pack	68,183	890,005	....	....	....	....	68,183	890,005
Chunks	335,148	4,633,516	(2)	(2)	....	....	335,148	4,633,516
Flaked and grated	75,988	673,477	(2)	(2)	....	....	75,988	673,477
Total	479,319	6,196,998	....	....	....	....	479,319	6,196,998
Skipjack:								
Solid pack	437,536	6,423,641	(2)	(2)	....	....	437,536	6,423,641
Chunks	2,438,692	33,152,093	(2)	(2)	....	....	2,438,692	33,152,093
Flakes and grated	471,618	4,256,009	(2)	(2)	....	....	471,618	4,256,009
Total	3,347,846	43,831,743	....	....	....	....	3,347,846	43,831,743
Tonno, solid pack	196,208	2,732,652	....	....	....	....	196,208	2,732,652
Unclassified:								
Solid pack	....	....	129,380	1,681,940	[3]45,844	[3]569,691	175,224	2,251,631
Chunks	....	....	225,077	2,595,413	[3]40,918	[3]417,622	265,995	3,013,035
Flakes and grated	16,824	31,545	77,497	837,316	[3]148,439	[3]1,030,896	242,760	1,899,575
Total	16,824	31,545	431,954	5,114,669	235,201	2,018,209	683,979	7,164,423
Total Tuna	9,203,388	121,877,312	1,224,344	15,962,826	383,117	3,664,161	10,810,849	141,504,299
Tunalike Fishes:								
Bonito:								
Solid pack	11,269	94,501	....	....	....	....	11,269	94,501
Chunks	1,588	11,357	....	....	....	....	1,588	11,357
Flakes and grated	32,377	259,488	....	....	....	....	32,377	259,488
Total	45,234	365,346	....	....	....	....	45,234	365,346
Yellowtail:								
Solid pack	979	7,434	....	....	....	....	979	7,434
Chunks	1,325	15,235	....	....	....	....	1,325	15,235
Flakes and grated	30,511	256,502	....	....	....	....	30,511	256,502
Total	32,815	279,171	....	....	....	....	32,815	279,171
Total Tunalike	78,049	644,517	....	....	....	....	78,049	644,517
Grand Total	9,281,437	122,521,829	1,224,344	15,962,826	383,117	3,664,161	10,888,898	142,148,816

[1]Includes a small pack of Big Eyed Tuna in California.
[2]Included with the unclassified species.
[3]Includes Bluefin, Yellowfin, and Baby Food Tuna.

NOTE:—"Standard Cases" represent the various sized cases converted to the equivalent of 48 No. ½ Tuna cans to the case, each can containing 7 ounces net weight of solid pack or 6½ ounces net weight of chunks, or 6 ounces net weight of flakes or grated. Dietetic and baby food Tuna packs are included in these totals. Tuna and Tunalike fishes were canned in 23 plants in California, 6 in Oregon, 4 in Washington, 2 in Hawaii, 2 in Maryland, and 1 plant each in Maine, Massachusetts, Pennsylvania, Puerto Rico, and American Samoa.

Pack of Tuna and Tunalike Fishes, by Can Sizes, 1954

Can and Case Size	Actual Cases	Value
1-pounds 12 cans	[1]27,098	$538,593
1-pound 48 cans	34,394	841,516
½-pound 48 cans	10,199,487	132,214,235
¼-pound 48 cans	738,056	6,549,311
4 ounces 100 cans	83,049	$1,322,808
Other sizes (converted to standard cases)	101,281	682,353
Total	11,183,365	142,148,816

[1]Includes a small quantity of 2 pound 48 can cases.

Pack of Pacific Sardines (Pilchards), 1954

Style of Pack	Standard Cases	Value
Natural, without sauce or oil	414,575	$2,459,491
In tomato sauce	842,923	6,583,778
In mustard sauce	49,748	372,065
Other[1]	25,407	368,198
Total	1,332,653	9,783.532

Can and Case Size	Actual Cases	Value
1 pound cans:		
15 ounces net, oval (48 cans)	741,805	$5,608,427
15 ounces net, tall (48 cans)	485,721	2,879,715
7½ ounces net (48 cans)	125,827	893,557
5 ounces net (100 cans)	60,724	401,443
Other sizes (converted to 15 ounces net (48 cans)	65	390
Total	1,414,142	9,783,532

[1]Includes fillets: Natural, in tomato sauce, in olive oil, and in tomato sauce and olive oil.

NOTE: "Standard Cases" represent the various sized cases converted to the uniform basis of 48 1-pound cans (15 ounces net). Sardines (Pilchards) were canned in 22 plants in California.

POFI Quarterly Report

(Continued from page 13)

Gear Improvement

Recent modifications of our longline gear changed the design from the standard 6-hook basket reported by Niska (1953) to a standard 11-hook basket. A recent gear test-cruise was made to further test steel cable longline fishing gear.

About 30 baskets of the steel gear was set with 30 baskets of cotton longline gear. The catching rate of the steel gear was essentially equal to that of the cotton gear. The time it took to set the steel gear was about 20% greater than for the standard cotton gear, but the hauling time for the two was about equal.

While a number of flaws still exist in the steel longline gear, significant improvements have been made. It was concluded from these tests that although no more steel gear could be fished than cotton gear in a given time, perhaps only one-half the number of fishermen might be required to fish steel gear.

Races of Yellowfin

Yellowfin data show no relationships between the size of parts and the fork lengths of the fish. Precise analysis has revealed gradients in fin length and body proportions along the Pacific Equator. The yellowfin from off Central America have shorter fins, shorter tails and larger heads than those farther west. Such trends may be correlated with oceanographic conditions.

The analysis has also shown that the body proportions are so different there could be little intermingling of yellowfin from the eastern and western Pacific. Less than 8% of the yellowfin in the Costa Rican area have proportions the same as those in the Line Islands area and less than 2% from Costa Rica are the same as those in the Caroline Islands area. The differences are about as great in 12-pound fish as in 120-pound fish. Any trans-Pacific migrations of the yellowfin seem very improbable.

On spearfishes our study shows marked variation in character and growth. Six species are recognized, (1) the swordfish, (2) the short-nosed spearfish, (3) the sailfish, (4) the black marlin, (5) the striped marlin, and (6) the blue marlin.

All species are shown to be fishes of the high seas widely distributed in the Pacific but with different centers of abundance. The swordfish and striped marlin prefer the more temperate waters, the blue marlin the equatorial region, the black marlin the coastal regions off Asia, America, and Australia.

Maximum weights of Pacific forms are noted as follows: swordfish—1,061 pounds, short-nosed spearfish—114 pounds, sailfish—132 pounds, black marlin—1,560 pounds, striped marlin—483 pounds, and blue marlin—1,450 pounds. All are broadly carnivorous on fish and cephalapods. The blue marlin probably spawns throughout most of the year in equatorial waters.

Four species of tuna larvae with their distribution in the central Pacific include: yellowfin, skipjack, bonito, and frigate mackerel. The latitudinal distribution of the four species appears to be continuous from Samoa (14½°S.) to approximately 32°N. (north of Hawaii). The longitudinal distribution extends at least from 120°W. to 180° longitude with a decidedly larvae-rich zone located between 140°W. and 180°, and 5°S. to 10°N., the region also found to contain the greatest abundance of adults.

Recently hatched larvae were found at all longitudes sampled, indicating spawning by tuna extends continuously over a broad section of the central equatorial Pacific. *

Yellowfin Tuna In Line Islands Area

The Honolulu-based fisheries
search ship *Charles H. Gilbert*
turned to port at the end of Apr
successfully completing a 6-wee
4,800-mile fishing cruise to the Li
Islands south of Hawaii. Tuna we
fished by the longline and trolli
methods around all of the maj
islands of the group.

According to Donald L. McK
nan, acting director of the Paci
Oceanic Fishery Investigations, t
purposes of the cruise were to asc
tain the abundance of yellowfin tu
in this area in early spring, and
tag and release as many of these fi
as possible in order to gain so
knowledge of their migrations a
growth.

Nearly 500 yellowfin were mea
ured, marked with plastic tubi
threaded through their back muscl
and returned to the sea. The migr
tory movements of the tuna in t
equatorial central Pacific are co
pletely unknown. Recaptures of ta
ged yellowfin will not only sh
light on the wider wanderings of t
species, but may also clarify the re
tionship, little understood at prese
between the large, deep-swimmi
fish taken by longlines in the op
sea and the smaller ones found
the surface waters close to the islan

The level of tuna abundance in
cated by longline catches was not
high as on some previous cruise
However, one day's set of 60 bask
of longlines produced a catch of
yellowfin weighing more than t
tons, and the size of the fish, whi
averaged slightly more than 1
pounds each, was within the ran
considered desirable for canning.

Trolling close in to the islands w
generally more successful, with
average of three yellowfin taken p
hour during 18 days of trolling wi
five lines. The highest trolling cat
rate, eight yellowfin per hour, w
made at Palmyra Island. The tu
caught by this method averag
about 33 pounds in weight, an ide
size for canning.

All yellowfin taken by eith
method which appeared likely to su
vive were tagged and released, a
the remainder of the catch, slight
over six tons, was brought back
Honolulu for experimental canni

EPORT FROM WASHINGTON

(Continued from page 8)

Tax relief is rated an excellent chance of getting congressional pproval at that time. The President balked at it this year because the overnment is still in the red. But if the budget men are right, Ike will ave made good on another of his campaign promises--a balanced federal udget and reduced personal taxes.

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RICE CONTROLS.--Industry, business and labor are lined up side-by-side o keep the Administration from seeking emergency stand-by price and age controls this year.

The Office of Defense Mobilization would like to get stand-by ontrols on the books now. Not that it thinks war is just around the orner, but so that the President would have authority for use at a oment's notice.

The idea is that if and when we are attacked, the entire economy ay be frozen instantly at current levels--to prevent run-away inflation.

Opponents to requesting such authority before it is needed claim hat the mere request of it would start off a big round of inflation, oarding and other evils.

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VAGE-HOUR BATTLE.--The fishing industry stands to lose millions of dollars a year if proposed amendments to the Fair Labor Standards Act are approved by the Congress.

The National Fisheries Institute is calling on its members to contact congressmen immediately and push for their opposition to amendments which threaten the industry.

The bills now being considered would increase the national minimum wage from the present 75 cents per hour to 90 cents and up to $1.35 cents per hour.

Bills of most importance to the fishing industry, however, are S770 which would eliminate the fishery exemption from the national minimum wage, and S662 which eliminates all on-shore activities from the exemption.

NFI says: "This is a matter that cannot be delayed. It is the most important legislation now pending in Congress affecting the fisheries. Should the present exemption be lost, it would cost the industry millions of dollars annually. It would also involve voluminous record keeping, and records would be subject to inspection by the Wage-Hour Division of the Department of Labor."

"These bills must be defeated at the local level," says the NFI. "Write your Senators and Congressmen today."

Chances now seem to favor passage of the bills by the House. For one thing, labor representatives, who are pushing hard for the changes, have found powerful allies in representatives from farming areas. Agriculture leaders promised to vote for minimum wage legislation in exchange for the labor vote to increase farm price supports. Labor men voted for high farm supports in the House last month, and now the farm vote is bound to pay off its debt.

FISH & WILDLIFE FUNDS.--At press time, Congress was about to pass the Interior Department appropriation bill providing money for the year beginning July 1. In this the Branch of Commercial Fisheries will be allotted $1.1 million--the same as for the current year.

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FISH STICKS.--Fish stick production continues its phenomenal rise. U.S. production in the first 3 months of 1955, according to government figures, reached a total of 18.1 million pounds. This is 8.1 million pounds more than was produced during the same period of 1954, and 2.7 million pounds more than the production of the last 3 months of 1954.

A total of 5.1 million pounds was packed during January; 5.8 million pounds during February, and 7.1 million pounds during March. The largest amount previously reported was in October 1954 when 5.6 million pounds were produced.

During the first quarter of this month, 86% of the total fish sticks were pre-cooked. This compares with 87% reported during the entire previous year.

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CANNED FISH.--The Fish and Wildlife Service says that fishery products and by-products registered "healthy" advances in both volume and value in 1954.

The 1954 pack of canned fishery products, processed in 400 plants in 25 States, Alaska, American Samoa, Hawaii, and Puerto Rico, amounted to 868 million pounds and was valued at $331 million to the packers. This is an increase of 10% in volume and 8% in value compared with the previous year.

Fishery by-products in 1954 were valued at $82 million, a gain of 10% over 1953, says the Service.

The pack of tuna and tunalike fishes topped that of any other items in both volume and value; it amounted to 10.9 million standard cases (214.5 million pounds) and was valued at 142.2 million dollars. Compared with 1953, this was an increase of 1.3 million standard cases in volume, and 16 million dollars in value.

The tuna pack was worth 54% more than that of salmon which ranked second in value. Tuna was packed in seven States, and in Hawaii, Puerto Rico, and, for the first year, in American Samoa.

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WORLD-WIDE FISH CONFAB.--The first world-wide fisheries conference was held in Rome, Italy, April 18 through May 10. Fifty-one nations had representatives at the conference held under United Nations auspices to consider conservation of fisheries.

The U.S. delegation headed by William C. Herrington of the Department of State included: Arnie J. Suomela, assistant director of the Fish and Wildlife Service; Oscar E. Sette, Director of the FWS Pacific Oceanic Investigations, Honolulu; Milton J. Lindner, Fishery Advisor, U.S. Embassy in Mexico City; Edward W. Allen, Seattle, member of several International Fishery Commissions; W. M. Chapman, Director of Research of the American Tunaboat Association of San Diego; and Charles E. Jackson, general manager of the National Fisheries Institute.

ish and Wildlife Service

Activities In Alaska

Reorganization Planned

Secretary of the Interior Douglas cKay announced a reorganization the Alaska activities of the Fish d Wildlife Service into two major elds: Management of the commerial fisheries, and administration of e wildlife and game-fish resources. his realignment will separate comercial fishing activities from sport shery and wildlife management.

The salmon fisheries—the Terriry's most important industry—sufred a sharp decline during the past) years in some parts of Alaska and vigorous restoration program was naugurated last year by Service Dictor John L. Farley.

Research on the Alaska commerial fisheries, which at present is eing handled by the Seattle laboraory under the direct supervision of ne Washington office, will be included in the commercial fisheries rganization so that all functions oncerned with the management of he commercial fisheries of the Territory will be handled by a single ield organization.

Both the commercial fisheries and he wildlife units will have their own nforcement staffs, but personnel, quipment, and facilities will be hifted between the two organizations s seasonal and program demands equire. One central unit in the Juneau headquarters office will provide fiscal, personnel and other administrative services to both organizations.

McKernan to Alaska

Donald L. McKernan has been named as Administrator of Alaska Commercial Fisheries. McKernan has been Assistant Director of the Service's Pacific Oceanic Fishery Investigations in Honolulu, Hawaii, for the past three years. Prior to that he served as Director of Research for the Oregon Fish Commission for six years. He also has had extensive experience in fishery research and administration with the Washington State Department of Fisheries where he directed research on the shellfish resources of the State.

In 1950, McKernan spent four months in Japan as a visiting fishery expert at the request of the Department of the Army. He is a graduate of the University of Washington and has completed more than two years of graduate work at that institution. He is the author of a number of publications on salmon and other Pacific coast fisheries.

McKernan is expected to report to his new post in Juneau some time in June. In the meantime, Seton H. Thompson, Chief of the Service's Branch of Alaska Fisheries, at Washington, D. C., who is now in Alaska, will begin the implementation of the new set-up.

Aku in Hawaiian Waters

The U.S. Fish and Wildlife Service research ship *Hugh M. Smith* returned to its base at Honolulu Friday, April 8, completing a month-long study of the distribution and movements of skipjack (aku) schools around the Hawaiian Islands.

According to Donald L. McKernan, acting director of the Pacific Oceanic Fishery Investigations, this was the latest in a continuing series of cruises planned to survey the seasonal changes in the abundance of this small, striped tuna species, which in the summer is the basis of the largest fishery and the only fish canning industry in the Islands, but which becomes very scarce in local waters in the winter.

By scouting for skipjack schools at all seasons of the year, and by tagging and releasing captured fish, the Fish and Wildlife Service scientists hope to obtain information on the movements of the fish that may enable fishermen to enlarge their fishing grounds over greater areas and to extend their season of highly productive fishing over a greater part of the year.

On the latest cruise of the *Smith*, most of the relatively small number of schools sighted were more than 35 miles from land—somewhat beyond the usual range of operations of the local sampan fleet. As is usual at this time of the year, the schools were made up for the most part of small to medium-sized fish and were wild and erratic in their behavior. However, one large school of small aku which bit well was encountered

(Continued on page 25)

"Summertime Is Tuna Time"

California's tuna industry received recognition in the form of a joint resolution adopted by the State Legislature at Sacramento during its current sessions.

Cognizant of the cheap tuna imports now flooding the country the legislators approved a resolution to assist in a campaign for added consumption and distribution of tuna through the country.

The campaign, termed "Summertime Is Tuna Time," was set for June 2 through June 11. In addition to the Legislature's sanction, the Tuna Research Foundation announced the industry is also receiving the cooperation of the United States Department of the Interior, and the Department of Agriculture on a nationwide basis.

In cooperation with the forthcoming campaign, the Legislature's resolution requested that all state agencies responsible for food purchases buy California tuna for consumption in State institutions. Further, the chief clerk of the Legislature was directed to send copies of the resolution to Governor Knight and several State departments. The latter included governing heads of State colleges and education departments, also the military and Navy bases within the State, urging their support in more frequent servings of California tuna.

The resolution emphasized that the tuna industry is seeking to solve its own problem through the development of a nationwide promotional campaign to increase consumption of canned tuna, rather than to seek governmental assistance in the form of subsidies. It also pointed out that cheap tuna imports threaten the California industry which produces more than $130,000,000 of product annually, and that cannery workers, fishermen, boat owners and processors face financial difficulty which could seriously impair the industry.

A spokesman for the Foundation pointed out that Japanese imports of tuna have risen from 15% prior to World War II to 35% of the United States market at the present time, with the threat of an even greater volume of the low tariff product to flood the domestic market.

The GLOBE

An International News File Compiled from FOREIGN REPORTS

Argentine.—The second Five Year Plan (1952-57) of the Republic of Argentina foresees an increase in fish production of about 185% above the average for 1947-51 (67,000 metric tons), and to reach a volume of 200,000 tons in 1957.

To obtain such an increase a coordinated research program for the systematic investigation of the continental seas of Argentina was started in May 1954. These investigations are to be carried out at sea and in various scientific institutions of the country.

Australia.—A large Sydney, Australia, tuna canner reports that tuna landings for the year 1954 totaled 1.5 million pounds.

British Honduras.—British Honduras exports of fishery products in 1954 totaled 343,000 pounds, valued at $100,400, compared with exports for 1953 totaling 260,200 pounds, valued at $71,500. The United States received 62% of the British Honduras fish and shellfish exports in 1954 as compared with 79% a year earlier. Spiny lobsters comprised the bulk of these exports.

Chile.—The governments of Chile and Peru have named their delegations to a Conference of the Permanent Committee of the Southern Pacific scheduled to be held in Quito beginning the first week of July. This committee was established by the recent Tripartite Agreement concluded between Peru, Chile and Ecuador, which is also known as the Declaration of Santiago. This established maritime sovereignty over a zone of 200 miles from the coast. As of May 4 the Ecuadoran government had not yet named its delegation to the Conference.

Colombia.—The Colombian Agricultural Society is studying the problem of the continental shelf and conservation of marine fisheries. Colombia may be preparing a resolution to claim the continental shelf surrounding its coast, and adherence to the tripartite claims of Chile, Peru, and Ecuador to jurisdiction over a 200-mile zone of territorial waters, according to an Embassy dispatch from Bogota.

Japan.—Total Japanese exports of fishery products (not including certain marine products, such as whale oil, agar-agar, etc.) in 1954 amounted to 141,000 metric tons, valued at $74.2 million, reports a U.S. Embassy dispatch from Tokyo. This is an increase of 16% in quantity and 22% in value as compared with 1953 exports of 121,000 tons, valued at $61 million. In 1952 exports of 100,000 metric tons were valued at $46 million. The United States was the principal receiver of Japanese exports of fishery products in 1952-54 on the basis of quantity and value.

Mexico.—The shrimp season at Guaymas closed with landings very light and catches per vessel were poor, according to a brief report of a trip to that area by a FWS representative.

According to a Guaymas shrimp producer, the Mexican shrimp industry in the Gulf of Lower California appears to be "undergoing advanced stages of depletion, especially for the more desirable large white shrimp." It is understood that Mazatlan and Topolobampa Bay have replaced Guaymas as the shrimp capital of Sonora, Mexico."

Mexico.—The Mexican Navy Department is well satisfied with results of the Veracruz fish-freezing plant and will construct three additional plants in Ciudad del Carmen, Campeche; Mazatlan, Sinaloa; and Guaymas, Sonora, according to recent Mexican press reports. Still another plant may be set up in Tampico or Tuxpan, according to the Navy Secretary. The Veracruz plant has a capacity for 20,000 metric tons of fish daily, but capacities of the projected plants has not yet been announced.

Netherlands.—In the Netherlands growing attention is being paid to the training and education of fishermen. A fishing school, recently opened by the Minister for Agriculture, Fisheries and Food, offers a striking example. The Minister pointed to the need for thorough training, since technical development impose higher demands on the crews of fishing vessels. These demands are not confined to nautical knowledge but also hold good for the handling of fish and fishery products.

Norway.—Norwegian fisheries should be able to reach an annual yield of 2 million metric tons in the course of a few years, declared the Permanent Under-Secretary to the Norwegian Ministry of Fisheries. He pointed out that in 1954 Norway's total fish yield was almost 1,900,000 tons, an output that broke all records. To insure an annual increased yield bigger vessels must be built, with more deep-sea fishing boats, says the report.

Pakistan.—A project agreement with Pakistan calling for an expenditure of $88,000 for fisheries development in West Pakistan was reported by the U.S. Foreign Operations Administration. The funds will be used to purchase gear and equipment for two exploratory fishing vessels previously acquired, equipment for a survey of inland waterways, and equipment for refrigeration rooms and display cabinets to improve fish marketing methods.

Peru.—The Peruvian Foreign Office delivered a reply to the United States note reserving its rights under the recent actions of the Peruvian Government taken pursuant to the Tri-partite Declaration of Santiago relative to the claim to jurisdiction over 200 miles of water seaward from the Peruvian coast. The Peruvian note rejected the United States position but it is understood that Peru will give consideration to a United States proposal to discuss the matter of conservation measures which are generally considered to be necessary.

ruise 30 of the /V Oregon

Good longline fishing for tuna was ınd by the *Oregon* east of Jamaica d in the Windward Passage area. ıring the four-week cruise (April May 2) 11 42-basket longline sets re made in the northwestern Carib- an and three sets were made in the ıtral Gulf of Mexico.

Yellowfin tuna were caught at six the seven stations east and north Jamaica and in the Windward ıssage at rates of 1 to 2.6 yellowfin r 100 hooks. At each of these six ıtions from one to six 50 to 60 ınd albacore were also caught.

Considerable difficulty was en- untered during two sets at the head the Windward Passage due to rge numbers of giant bluefin in at area. At each of these stations ght bluefins were landed weighing om 400 to 600 pounds each. Judg- g by broken gear at least that many ore were caught and lost.

The four sets made between the ucatan Channel and the western tip Jamaica caught no yellowfin or bacore. One large bluefin was ıught north of Grand Cayman and another was caught on a set east of Cozumel Island.

Three sets were made in the Gulf of Mexico. A single yellowfin was caught on the last set of the trip (May 1) 180 miles south of Mobile. This fish weighed 190 pounds and is the largest yellowfin that has been caught in the Gulf to date.

Activities in Alaska . . .

(Continued from page 23)

about 63 miles due south of Pearl Harbor.

The tagging of tuna with suitably inscribed pieces of white plastic tubing threaded through the muscles of their backs, a method which has proven highly successful in California, was continued on the cruise of the *Smith*, and 107 aku (three to seven pounds in weight) were so marked and released alive. This makes a total of 285 fish marked since the tagging work was initiated last summer.

The recapture of these tagged tuna will give valuable information about their migratory movements, their age and rate of growth. All fishermen are therefore urged to report any tagged aku with the fullest possible information on the time and place of capture.

Good Sardine Catch Forecast

A good catch of sardines for Southern California this year has been predicted by the U.S. Fish and Wildlife Service.

John C. Marr, chief of the service's South Pacific fishery investigations at La Jolla, said that sardines have spawned in considerable numbers off Southern California and Northern Baja for the second consecutive year.

Based on present indications, the local industry can expect a catch of 65,000 tons this year . . . about the same as in 1954, and much better than the several years previous.

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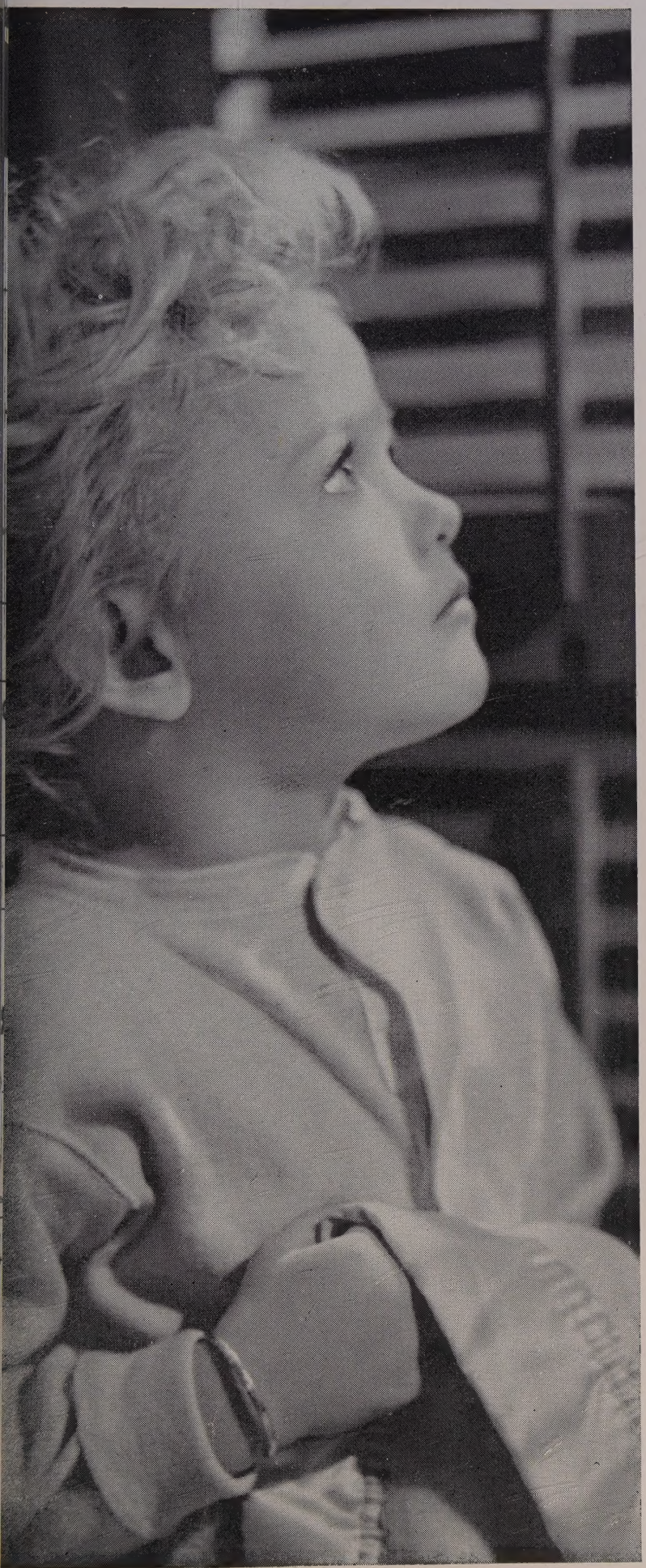

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But too many are lost. Too many seek care too late. To fight this healing war takes money—money for education, research, drugs, equipment.

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American Cancer Society

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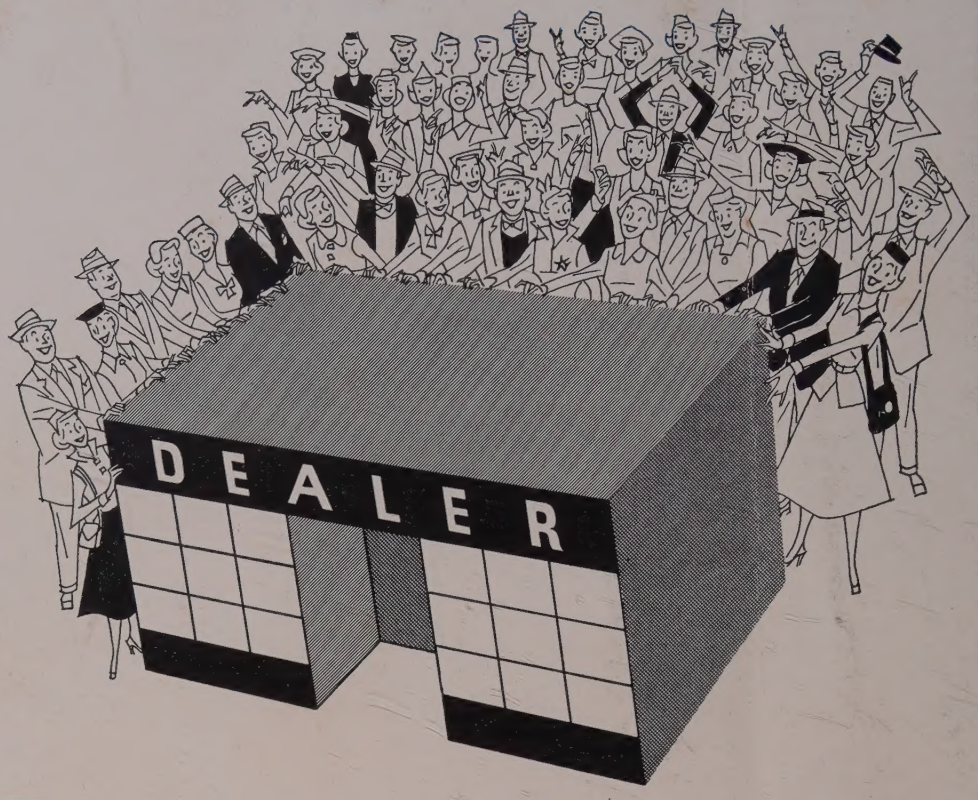

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